

## Claims

[c1] What is claimed is: Clean Air Toilet System–Tank or "C.A.T.S–Tank" comprising:

*(1) Air Grille and Odor Air Filter* Air Grille and Odor Filter, are build together in one element, and are designed to: *a)* Exhaust the Odorous Air from the toilet bowl, before the odor spreads inside the bathroom. *b)* Cleans the Odorous Air before it is released outside, thus protecting the exterior environment *c)* Protects the C.A.T.S–Tank from clogging A large selection of materials are currently available to use : sheet metal, ceramic, plastic, glass, rubber, wood or any other water proof material, easy to clean and have a good strength. Air filter is membrane type (nylon having micron size hole). *The Grille size:*100mm. wide/20mm. height *The Filter size:* 100mm. wide/60mm. height

The distance between the Grille Air and Odor Filter will be variable , depending on the toilet bowl and toilet seat type. The connection between element (1) and the C.A.T.S–Tank container (3) is the same type with the vacuum cleaner hose. The Air Grille and Odor Air Filter, will be replaced each 6mo. The Air Grille and Odor Air Filter is a novel element with a novel function and location.

*(2) Odor Air Duct* The Odor Air Duct is located inside the C.A.T.S–Tank is immersed in the water. The duct encircles the 3 sides of the C.A.T.S–Tank. The Odor Air Duct's wall is water proof . The Odor Air Duct is designed: *a)* To create a passage for the Odor Air to go through the C.A.T.S–Tank *b)* To make the connection between the Odor Air Grille and the bathroom Exhaust Fan located above the ceiling *c)* To reduce the water tank capacity  
Material used for the Odor Air Duct are: ceramic, cast iron, glass or any water proof material with the required strength *The size:* 80mm. wide/60mm. height (or an equivalent diameter). The duct size has to be adequate to the function of circulating and carrying out the odor air, into the exhaust system and from there further forced out to the exterior environment. The Odor Air Duct inside the water tank is a novel concept, location and function.

*(3) C.A.T.S–Tank Water Container* The C.A.T.S–Tank Water Container is a standard toilet tank, designed to keep the necessary water to flush in the toilet bowl. The water capacity in the C.A.T.S–Tank is less than a standard tank. The Odor Air Duct(2) placed inside the C.A.T.S–Tank will reduce the water quantity.

Materials used for the C.A.T.S–Tank Water Container are: ceramic, cast iron, glass or any water proof material with the required strength.

*(4) Back C.A.T.S–Tank Openings (two).* There are two openings for access into the C.A.T.S–Tank. The function is to connect the C.A.T.S–Tank with the existing Exhaust System ducts from the exhaust fan above the ceiling *The size:* 50mm. in diameter for each opening.

*(5) C.A.T.S–Tank Lid* It is the standard toilet tank lid.

*(6) Odor Air Tight Insulation* The Odor Air Tight Insulation is a Rubber Foam Weather Seal Stick Tape placed under the toilet seat, around the edge of the toilet seat, between the toilet bowl rim and toilet seat.. The function of the insulation: *a)* To stop the Odor Air from the toilet bowl to spread into the bathroom. *b)* To direct the Odor Air inside the bowl to the back, where the Exhaust Grille is located. The size of the tape is 20mm. wide and 10mm. thick.